CLAIMS

1. A porous membrane of vinylidene fluoride resin, comprising: a copolymer of 100 mols of a vinylidene fluoride monomer and 0.01 – 10.0 mols of a hydrophilic monomer having at least one species of hydrophilic group selected from epoxy group, hydroxy group, carboxy group, ester group, amide group and acid anhydride group.

2. A porous membrane according to Claim 1, wherein the hydrophilic monomer is at least one epoxy group-containing vinyl monomer selected from the group-containing vinyl monomer selected from the group consisting of glycidyl (meth)acrylate, 2-methylglycidyl (meth)acrylate, 2-ethylglycidyl (meth)acrylate and 1-methylglycidyl (meth)acrylate, and glycidyl allyl ether.

3. A porous membrane according to Claim 1, wherein the hydrophilic monomer is at least one hydroxy group-containing vinyl monomer selected from the group consisting of hydroxyethyl methacrylate and hydroxyethyl acrylate.

4. A porous membrane according to Claim 1, wherein the hydrophilic monomer is at least one carboxy group-containing vinyl monomer selected from the group consisting of monomethyl maleate, monoethyl maleate, monomethyl citraconate, monoethyl citraconate, acrylic acid, methacrylic acid and β-methacryloyloxyethyl hydrogen succinate.

5. A porous membrane according to Claim 1, wherein the hydrophilic monomer is at least one ester group-containing vinyl monomer selected from

the group consisting of vinyl acetate, 2-(N,N-diethylamino)ethyl acrylate, 2-(N,N-dimethylamino)ethyl methacrylate, 2-(N,N-diethylamino)ethyl methacrylate, vinylene carbonate and vinyl propionate.

6. A porous membrane according to Claim 1, wherein the hydrophilic monomer is at least one amide group-containing vinyl monomer selected from the group consisting of diacetone-acrylamide, methacrylamide, N-(3-dimethylaminopropyl)-acrylamide, N-(3-dimethylaminopropyl)-methacrylamide, N,N-dimethyl-acrylamide, N-isopropyl-acrylamide, and N,N-diethyl-acrylamide.

7. A porous membrane according to Claim 1, wherein the hydrophilic monomer is at least one acid anhydride group-containing vinyl monomer selected from the group consisting of maleic anhydride and citraconic anhydride.

8. A porous membrane according to any one of Claims 1 – 7, wherein the vinylidene fluoride copolymer has a melting point of 150 – 180 ℃.

9. A porous membrane according to any one of Claims 1 – 8, wherein the vinylidene fluoride copolymer has an inherent viscosity of 0.5 – 5 dl/g.

10. A porous membrane according to any one of Claims 1 – 9, which is in the form of a hollow fiber.

11. A porous membrane according to any one of Claims 1 – 10, which has been treated with a basic solution.

12. A process for producing a porous membrane of vinylidene fluoride resin comprising: mixing 100 wt. parts of a vinylidene fluoride resin including a copolymer of 100 mols of a vinylidene fluoride monomer and 0.01 – 10.0 mols of a hydrophilic monomer having at least one species of hydrophilic group selected from epoxy group, hydroxy group, carboxy group, ester group, amide group and acid anhydride group with 70 – 250 wt. parts of a plasticizer and 5 – 80 wt. parts of a good solvent for the copolymer to provide a composition; melt-extruding the composition into a film; cooling the film preferentially one side thereof to solidify the film; extracting the plasticizer; and further stretching the film.